

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by applicant's admitted prior art Nielsen (WO 01/70128 A1).

Regarding claim 9, Nielsen discloses a method of making artificial dental bridges, comprising:

prior to carrying out heat treating

applying a suspension comprising particles to densely sintered high strength ceramic individual bridge parts;

drying the suspension comprising particles to form a layer of particles;

applying a suspension of glass material to the layer of particles; and

heat treating to a sufficient temperature and for a sufficient time so that the glass material melts and penetrated completely through the joint (corresponding to the claimed "heat treating the individual bridge parts with the applied layer particles and the suspension of glass material with a one step heat treatment" recites in the instant claim 1 that happens after carrying out applying a suspension to bridge parts drying the suspension, and applying a suspension of glass material to the layer of particles prior to heat treatment) (Specification of the instant application, paragraph 12).

Regarding claim 10, Nielson discloses the suspension comprising particles comprises particles, dispersant for the particles, binder for the particles, and a solvent (Specification of the instant application, paragraph 12).

Regarding claim 11, Nielson discloses the particles comprise aluminum oxide particles (Abstract).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art Nielsen (WO 01/70128 A1) as applied to claims 9-11 above, and further in view of applicant's admitted prior art Salomonson (WO 9913795).

Nielsen does not expressly disclose the properties of the individual bridges parts and the glass material. However these properties are well known and desired in the dental bridge art (to avoid distortion of the bridge, obtain a good esthetics and optimal fit) as shown by Salomonson (claims 2-8 and page 5, line 2-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the desired properties for the individual bridges parts and the glass material for the advantages taught by Salomonson in the method taught by Nielsen.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art Nielsen (WO 01/70128 A1) as applied to claims 9-11

above, and further in view Scherer (U.S Patent No. 4574063). Nielsen does not expressly discloses that particles in the layer of particles are large enough such that drying stresses on removal of the solvent do not lead to catastrophic failure of the dental bridge. Scherer discloses the cracking problem is avoided with the relatively large particle sizes of suspended oxides (column 1, line 53-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use particles large enough in the method taught by Nielsen to avoid cracking as taught by Scherer.

#### ***Response to Arguments***

Applicant's arguments filed 12/28/2007 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a method that includes a single heat treatment) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant essentially argues that Nielsen does not disclose carrying out applying a suspension to bridge parts drying the suspension, and applying a suspension of glass material to the layer of particles prior to heat treatment. Upon further consideration, the Examiner found that one can interpret the amended claim 9 with the phrase "comprising prior to carrying out heat treating" to not limited to consisting of only a single heat

treating. Therefore, as long as a reference teaches a heat treating step after carrying out applying a suspension to bridge parts drying the suspension, and applying a suspension of glass material to the layer of particles prior to heat treatment; it would read on the invention as recited in the instant claim 1.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHU H. NGUYEN whose telephone number is (571)272-5931. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Philip C Tucker/  
Supervisory Patent Examiner, Art Unit 1791